CLAIMS

1. A device for removably fixing a tooth tool (4) to a head (3) of a handpiece (1), said handpiece (1) being formed by a handle (5), a neck (2) and a head (3), each of these parts being provided in its inside with a drive shaft (6), characterized in that said tool (4) is disposed in a bore (7) formed in the head (3) of the handpiece (1), and in that it is held inside said bore (7) by the contact with the drive shaft (6).

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- 2. The device for removable fixing as claimed in claim 1, characterized in that the drive shaft (6) is surrounded by a rubber shroud.
- 3. The device for removable fixing as claimed in one of the preceding claims, characterized in that the drive shaft (6) is provided with a device forming a spring in the area of the handle (5) of the handpiece (1).
- 4. The device for removable fixing as claimed in one of the preceding claims, characterized in that said handpiece (1) is equipped with a control device (10) allowing the tool (4) to be withdrawn from or engaged in the bore (7).
- 5. The device for removable fixing as claimed in claim 4, characterized in that the control device (10) is formed by a ring (11) placed on the neck (2) of the handpiece (1), said ring (11) being provided with a stub (12) that fits in a groove (13) formed in the drive shaft (6).
- 30 6. The device for removable fixing as claimed in one of the preceding claims, characterized in that the drive shaft (6) is provided with a gear (8) at the

end in contact with the tooth tool (4).

- 7. The device for removable fixing as claimed in claim 6, characterized in that the gear (8) is inclined on its sides.
- 5 8. The device for removable fixing as claimed in one of the preceding claims, characterized in that the bore (7), receiving the tool (4), and the drive shaft are situated in different axes.
- 9. The device for removable fixing as claimed in claim 8, characterized in that the drive shaft (6) is mounted in its seat with play, which allows it to be offset relative to the tooth tool (4) during its rotation.
- 10. The device for removable fixing as claimed in one of the preceding claims, characterized in that the point of contact between the drive shaft (6) and the tooth tool (4) is offset.